



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,067	12/11/2003	Katsuichi Minami	MAT-8493US	1264
23122	7590	08/14/2006	EXAMINER	
RATNERPRESTIA P O BOX 980 VALLEY FORGE, PA 19482-0980			WILLIAMS, MARK A	
			ART UNIT	PAPER NUMBER
			3676	

DATE MAILED: 08/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/735,067

Applicant(s)

MINAMI ET AL.

Examiner

Mark A. Williams

Art Unit

3676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 10, 11 and 13-20 is/are pending in the application.
- 4a) Of the above claim(s) 12, 19 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 10, 11 and 13-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 12, 19, and 20 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 10-11, 13, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohacik et al., US Patent 5,682,644, in view of Sasame et al., US Patent 3,929,596. Bohacik provides an opening and closing device adapted to be coupled to a moveable part of a second device, the opening and closing device comprising a case 11 in substantially tubular shape including a first end face near 12 having a first through-hole in a center thereof; a stator 25 facing the first end face inside the case, the stator having a portion 16 extending from a stator face; a rotor 15 accommodated in the case and facing the stator, the rotor being rotatable with respect to the stator; a spring 42 for pushing the rotor to the stator; wherein the portion of the stator extending from the stator face is disposed through an opening in a slide member in the form of a friction bushing 19. The stator has a stator cam 24 projected toward opposite to the first end face, wherein the rotor has

a rotor cam 28 projected toward the stator wherein the spring pushes the rotor in a direction in which the rotor cam is contacted with the stator cam. A cover 44 for covering an opening of a second end face of the case (end of the tubular casing near 46), wherein the cover is rotatable with respect to the case, wherein the spring is interposed in a contracted manner between the cover and the rotor. A fixed shaft 48 is provided as claimed. The cover, case, rotor, and the spring are all rotatable simultaneously, as claimed.

Bohacik discloses the claimed invention except (1) the bushing 19 also being A lubrication means, including a metal plate with a lubricant layer as claimed, were the plate can be a disk washer; and (2) the cover covering a portion of the case, as claimed.

Regarding (1), Sasame teaches the general known concept of using a coating on sliding metal members or the like for the purpose of providing lubricating properties, thereby reducing frictional wear. It would have been obvious at the time the invention was made for one skilled in the art to use such a member in the device of Bohacik for the purpose of providing lubricating properties, thereby reducing frictional wear. Although Bohacik does not explicitly disclose a metal disk, it is well established in the art of hinges, bearings, and like members to use such members for such purposes, and is considered an obvious modification. Such

a modification is not critical to the design, nor would it have solved any stated problem.

Regarding (2), it would have been an obvious matter of design choice to make the different portions of the cover of whatever form or shape was desired or expedient. A change in form or shape is generally recognized as being within the level of ordinary skill in the art, absent any showing of unexpected results. *In re Dailey et al.*, 149 USPQ 47. Such a modification is not critical to the design and would have produced no unexpected results. Such a modification may result from putting a head portion on the screw device/cover 44 extending outside the housing, so that the screw device/cover may be engaged on an external surface of the head by a wrench or similar type tool for operation thereof.

3. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohacik et al. in view of Sasame et al. in further view of Murray, US Patent 5,996,178 and Bacroft, US Patent 4,713,861. The combination does not teach the first end face of the case being formed of a molded member of lubricating material, and the first end face serves as the lubricant means; nor the stator being formed of a molded member of lubricating material, and the stator serves as the lubricant means. Both Murray and Bacroft teach hinge elements being of molded material

having lubricating properties, for the purpose of reducing friction between elements. It would have been obvious for one skilled in the art to have included in the design of the combination such a modification, for the purpose of reducing friction between elements of the hinge.

4. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bohacik et al. in view of Sasame et al. in further view of Japanese Patent JP 6323325 A ('325). The combination disclosed the claimed invention except teaching fluoride in the lubricating material. Patent '325 teaches a lubricating material containing a fluoride, for the purpose of improving the wear resistance of the material. It would have been obvious at the time the invention was made for one skilled in the art to have included in the design of the combination such a modification, for the purpose of improving the wear resistance of the material.

5. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bohacik et al. in view of Sasame et al. in further view of Wilcox et al., US Patent 5,628,089. Although the combination does not explicitly include first and second foldable housings and the case being to the first housing and the stator fixed to the second housing, as claimed, such an arrangement is well known in the art and has

been used in a variety of electronic devices. Wilcox shows such an arrangement in the application of a cell phone, including a similar hinge arrangement as claimed by applicant. It would have been obvious at the time the invention was made for one skilled in the art to have included such a modification in the device of the combination, for the purpose of gaining the benefit of such a hinge design in the application of an electronic device, such as a cell phone.

#### *Election/Restrictions*

6. Newly submitted claims 12, 19, and 20 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the additional lubricating means of these claims are not necessary for the originally claimed invention to function properly and constitute a separate and distinct species of invention.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 12, 19, and 20 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Response to Arguments***

7. Applicant's arguments with respect to claims 1-3, 10, 11, and 13-18 have been considered but are not persuasive.

Applicant argues that there is no disclosure in the applied art of a rotatable spring; nor of the abutment cover means being rotatable simultaneously with the rotor, case, and spring, as claimed. From the examiner's standpoint, there is essentially no difference in how the spring member of the applied art is disclosed and how applicant has disclosed his spring member; hence, it is reasonable to assume they function in the same manner. Looking at other prior art or record, it does indeed appear that there is nothing novel in such a claimed spring, cam, and housing arrangement. In addition, clearly the rotor 15 is fixed for relative rotation with the casing at (27, 15') as in figures 1 and 2; and the cover 44 is fixed for relative rotation with the casing by screw threads (only relatively rotatable to the casing when engaged by an appropriate tool, such as a screw driver). It is reasonable to assume the spring of the applied art will rotate along with these other elements because it would appear that the only force resisting such rotation of the spring would be the inertia of the spring itself (which is obviously too small to be an issue). Thus, it is believed that each of these limitations has been met, as

outlined in the above rejection. Applicant has provided no structural distinction between his invention and the applied art of record.

### *Conclusion*

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Williams whose telephone number is (571) 272-7064. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Glessner can be reached on (571) 272-6843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mark Williams  
7/19/06



BRIAN GLESSNER  
SUPERVISORY PATENT EXAMINER